

CLAIMS

1. An information routing system for an integrated data network, comprising a plurality of blocks each coupled to an information router, wherein each block is registered in the information router, and wherein at least one of the blocks issues an information request, and wherein the information router is adapted to fulfil the information request by forming and exchanging a proper dataset on the basis of information provided by and information processed by the blocks.

10 2. An information routing system as in claim 1, wherein the information router processes each unit of information it handles as a field within a dataset, and wherein the dataset is uniquely identified and associated with the block first responsible for providing a field, and whereby on receipt of the information request including a field identifier, the information router operates to match a requested field with a proper dataset having at least one field corresponding to the requested field and selected from an available dataset.

15 3. An information routing system as in claim 1, wherein the information router processes each unit of information it handles as a field within a dataset, and wherein the dataset is uniquely identified and associated with the block first responsible for providing a field, and whereby on receipt of the information request including a field identifier, the information router operates to match a requested field with a proper dataset having at least one field corresponding to the requested field and selected from a newly created dataset.

20 25 4. An information routing system as in claim 1, wherein each block is a functional element in an integrated data network, and wherein each block is registered in the information router, and wherein at least one of the blocks is registered as an information-processing element capable of producing at least one output field when provided with at least one input field, and wherein the information router is programmed to register such capability in the form of an exchange dataset for each block with such

capability specifying the input and the output fields for each such block, and wherein the information router operates to form an aggregate dataset of at least one field from an available dataset and at least one exchange dataset so as to enable the fulfilment of the information request.

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5. An information routing system as in claim 1, wherein each block is a functional element in an integrated data network, and wherein each block is registered in the information router, and wherein at least one of the blocks is an information-providing element capable of providing a dataset comprising at least one field, and 10 wherein the information router operates to form an aggregate dataset of the at least one field from the said dataset and at least one field from another dataset so as to enable the fulfilment of the information request.

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6. An information routing system as in claim 5, wherein the aggregate dataset is obtained by forming at least one new dataset.

7. An information routing system as in claim 5, wherein the aggregate dataset is obtained by using an existing dataset.

8. An information routing system as in claim 1, wherein the information request includes a unique identifier and attributes which are used to prioritize the fulfilment of information requests in the information router.

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9. An information routing system, comprising:  
a plurality of blocks, wherein each block is a functional element in an integrated data network, and wherein at least one of the blocks issues an information request based on its requirement to receive information from at least one other block, and  
an information router coupled to the blocks, comprising at least one computer processor programmed to manage an exchange of at least one unit of information between the blocks in order to fulfil the information request,

wherein each block is registered in the information router, some of the blocks being capable of functioning as information-providing elements and some of the blocks being registered as information-processing elements, and

5 wherein the information router processes each unit of information it handles as a field within a dataset which is uniquely identified and associated with the block first responsible for providing a field, and

whereby on receipt of the information request, the information router operates to match a requested field with a proper data set having at least one field corresponding to the requested field and selected from an available dataset.

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10. An information routing system as in claim 9, wherein at least one block is an information-processing element capable of producing at least one output field when provided with at least one input field, and wherein the information router is programmed to record such capability in the form of an exchange dataset for each block with such capability specifying the input and the output fields for each such block, and wherein the information router operates to form an aggregate dataset of at least one field from an available dataset and at least one exchange dataset so as to enable the fulfilment of the information request.

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11. An information routing system as in claim 9, wherein at least one block is an information-providing element capable of providing a dataset comprising at least one field, and wherein the information router operates to form an aggregate dataset of the at least one field from the said dataset and at least one field from another dataset so as to enable the fulfilment of the information request.

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12. An information routing system as in claim 9, wherein each information request specifies an information request value, and wherein the information router uses the information request value as a factor in determining whether to fulfil the information request.

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13. An information routing system as in claim 9, wherein each exchange dataset specifies an exchange dataset cost, and wherein the information router uses the exchange dataset cost as a factor in determining whether to fulfil the information request.

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14. An information routing system for an integrated data network, comprising a plurality of blocks each coupled to an information router,

10 wherein at least one of the blocks issues an information request, and wherein the information router is adapted to fulfil the information request by forming and exchanging a proper dataset on the basis of information about the blocks as registered in the information router, and

wherein each block is a functional element in an integrated data network and is registered in the information router, and wherein at least one of the blocks is registered as an information-processing element capable of producing at least one output field when provided with at least one input field, and wherein the information router is programmed to register such capability in the form of an exchange dataset for each block with such capability specifying the input and the output fields for each such block, and wherein at least one of the blocks is capable of functioning as an information-providing element capable of providing a dataset comprising at least one field, and

wherein the information router operates to form an aggregate dataset of the at least one field from the said dataset and at least one exchange dataset so as to enable the fulfilment of the information request.

15. A method of facilitating the exchange and processing of information 25 between a plurality of blocks, wherein each block is a functional element in an integrated data network,

providing an information router coupled to each of the blocks, comprising at least one computer processor programmed to manage an exchange of at least one unit of information between the blocks in order to fulfil information requests issued by the 30 blocks, wherein the information router processes each unit of information it handles as a

field within a dataset which is uniquely identified and associated with the block first responsible for providing a field,

registering each block in the information router, some of the blocks being capable of functioning as information-providing elements and some of the blocks being  
5 registered as information-processing elements, and

at least one of the blocks issuing an information request based on its requirement to receive information from at least one other block,

the information router operating to match a requested field with a proper data set having at least one field corresponding to the requested field and selected from an  
10 available dataset.

16. A method of facilitating the exchange and processing of information between a plurality of blocks, wherein each of the blocks is a functional element in an integrated data network, comprising

providing an information router coupled to each of the blocks,

registering each of the blocks in the information router, some of the blocks being capable of functioning as information-providing elements and some of the blocks being registered as information-processing elements,

at least one of the blocks issuing an information request including a field identifier, and

the information router fulfilling the information request by forming and exchanging a proper dataset on the basis of information provided by and information processed by the blocks.

25 17. A method as in claim 16, wherein the information router fulfils the information request by matching a requested field with a proper dataset having at least one field corresponding to the requested field and selected from an available dataset.

30 18. A method as in claim 17, wherein at least one of the blocks is registered as an information-processing element capable of producing at least one output field when provided with at least one input field, and wherein the information router is

programmed to register such capability in the form of an exchange dataset for each block with such capability specifying the input and the output fields for each such block, and wherein the information router operates to form an aggregate dataset of at least one field from an available dataset and at least one exchange dataset so as to enable  
5 the fulfilment of the information request.

19. A method as in claim 17, wherein each block is registered in the information router, and wherein at least one of the blocks is capable of functioning as an information-providing element capable of providing a dataset comprising at least one field, and wherein the information router operates to form an aggregate dataset of the at least one field from the said dataset and at least one exchange dataset so as to enable  
10 the fulfilment of the information request.

20. A method as in claim 16, wherein the information request includes a unique identifier and attributes which are used to prioritize the fulfilment of information requests in the information router.

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